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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/926,790	03/18/2002	Anders Engqvist	ENGQ3001/JEK	8656
23364	7590	11/29/2005	EXAMINER	
BACON & THOMAS, PLLC 625 SLATERS LANE FOURTH FLOOR ALEXANDRIA, VA 22314			MISTRY, O NEAL RAJAN	
			ART UNIT	PAPER NUMBER
			2625	

DATE MAILED: 11/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/926,790 ✓

Applicant(s)

ENGQVIST ET AL.

Examiner

O'Neal R. Mistry

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2001.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 2-6 and 9-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-6 and 9-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

The response received on 10/11/2005 has been placed in the file and was considered by the examiner. An action on the merits follows.

***Response to Arguments***

The arguments filed on 10/11/2005 have been fully considered. A response to these arguments is proved below.

**Examiner's Response:**

Response to applicant's amendment to drawings (Figure 3 & Figure 5), the objection to the drawings has been withdrawn.

Response to applicant's amendment to specification, the objections to the specification has been withdrawn.

Applicant's arguments with respect to claims 2-6, 9-13 have been considered but are moot in view of the new ground(s) of rejection.

In addition the examiner interprets that the Conners discloses a method of imaging the wood pieces by using optical imaging cameras. The imaging is consisted of two different types of imaging method, such as, color imaging and grain imaging. The color imaging just takes the color of wood, and the grain imaging uses a method of determining the direction of the grain. The grain imaging method uses individual points to determine the direction of the grain. This allows the computer to calculate the direction accurately. Geiger discloses a method of scanning the logs for damage, and

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physical characteristics for organizing the logs in the appropriate categories. The system first searches for damages within the piece of wood like cracks, knots, or insert damage, and next, scans for physical features. The camera scans for features because it allows system to determine the type of wood, or the length of the log.

The examiner after reviewing the claim language interprets that the combination of Connors and Geiger reads on the claim limitations of claims 12 & 13.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 2-6, 9-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Connors et al (USPN 5,761,070) in view of Geiger et al (5,544,757).

Connors discloses using an optical image analysis system to perform an optical image analysis (col. 18 lines 19-31) for determining positions of individual points of a wood surface profile from an optical image of the log end (col. 38 & 39, Note the examiner interprets the system using the grain sorting. The grain sorting is done by determining the edges of the log. Next, the system finds the vertical edges to determine points on the log, for the method of sorting.).

Connors does not expressly disclose using at least one further measurement system to determine position so the individual points on the log end, and combining the position determined from said optical image analysis system and the positions determined from the said at least one further measurement system to create an adequate wood surface profile.

However, Geiger discloses using at least one further measurement system to determine position so the individual points on the log end (col. 2 lines 63- col. 3 line 4), and combining the position determined from said optical image analysis system and the positions determined from the said at least one further measurement system to create an adequate wood surface profile (col. 3 lines 5-45).

Connors & Geiger are combinable because they are from the same field of endeavor i.e. lumber sorting by image processing (col. 1 lines 5-20, Connors) & (col. 1 lines 8-11, Geiger).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine and incorporate the teachings taught by Geiger into the system of Connors.

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The suggestion/motivation for doing so would have been to one of ordinary skill in the art because it would allow the system to determine different types of wood, physical defects in the wood, the shape of the wood, or the dimensions (col. 1 lines 50-60), as taught by Geiger.

Therefore, it would have been obvious to combine Conners with Geiger to obtain the invention as specified in claim 12.

In regards to claim 2, Conners in view of Geiger discloses the optical image analysis system creates an image of a log end, which image is created by a non-transradiating technique (col. 4 lines 5-10).

In regards to claim 3, Conners in view of Geiger discloses a log end image, obtained by the optical image analysis, is combined with positions for individual points in the log, whose positions have been obtained with another, under bark measuring system in order to determine the wood surface profile (col. 7 lines 1-15, '757, Note the examiner interprets the system looks for cracks which below the bark of the tree.).

In regards to claim 4, Conners in view of Geiger discloses a log end image, obtained by said optical image analysis, is combined with positions for individual points on the log, whose positions have been obtained with another, on bark measuring system in order to determine the wood surface profile (col. 18, Note the examiner interprets the system

scan the outside of the wood for color, and depending on the color the system uses this information to categorizing the log.).

In regards to claim 5, Connors in view of Geiger discloses a log end, obtained by the optical image analysis, is combined with another log end image obtained with some other measuring method (col. 21, '070, Note the examiner interprets that system uses two different methods of imaging a piece of wood. The first is by scanning the piece of wood for different types of color, and second is to scan the grain lines of the log.

Depending on the both imaging methods the system afterwards make decision on the type of wood and then sorts the log.)

In regards to claim 6, Connors in view of Geiger discloses a log end profile, obtained by said optical image analysis, is replaced or combined with another log end profile, obtained with some other measuring method, in the those areas of the wood surface profile where the wood surface profile obtained by the image analysis is less accurately determined than the wood surface profile obtained with some other measuring method for the same area (cols. 12, 13, & 14, Note the examiner interprets that the system uses two different image methods, imaging color and imaging grain. The system operates both methods, but if one method does not operate functionally, the system will using the other method of images for sorting the piece of wood. For example, if the system performs a color image on a piece of log, and one camera picks up a light and other camera picks up dark brown, the system will using imaging grain method for sorting,

because the information was not accurate by imaging color method. The examiner interprets this to read on the claim limitation).

In regards to claim 13, Conners discloses an optical image analysis system for determining point positions of individual points of a wood surface profile from an optical image of the log end (col. 38 & 39, Note the examiner interprets the system using the grain sorting. The grain sorting is done by determining the edges of the log. Next, the system finds the vertical edges to determine points on the log, for the method of sorting.).

Conners does not expressly disclose at least one further measurement system for determine positions of individual points on the log end.

However, Geiger discloses at least one further measurement system for determine positions of individual points on the log end (col. 2 lines 63- col. 3 line 4).

Conners & Geiger are combinable because they are from the same field of endeavor i.e. lumber sorting by image processing (col. 1 lines 5-20, Conners) & (col. 1 lines 8-11, Geiger).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine and incorporate the teachings taught by Geiger into the system of Conners.

The suggestion/motivation for doing so would have been to one of ordinary skill in the art because it would allow the system to determine different types of wood,



physical defects in the wood, the shape of the wood, or the dimensions (col. 1 lines 50-60), as taught by Geiger.

Therefore, it would have been obvious to combine Conners with Geiger to obtain the invention as specified in claim 13.

In regards to claim 9, Conners in view of Geiger discloses the optical image analysis system comprises a non-transradiating measuring system, which creates an image of a log end (col. 4 lines 5-10).

In regards to claim 10, Conners in view of Geiger discloses the another measuring system is an under bark measuring system is an under bark measuring system, which determines positions for individual points in the log (col. 7 lines 1-15, '757, Note the examiner interprets the system looks for cracks which below the bark of the tree.).

In regards to claim 11, Conners in view of Geiger discloses the another measuring system is an on bark measuring system, which determines positions for individual points on the log (col. 18, '070).

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to O'Neal R. Mistry whose telephone number is (571) 272-4052. The examiner can normally be reached on 9am - 6pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh M. Mehta can be reached on (571) 272-7453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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